

Unit 6

Rational Expressions

Day 2

Addition & Subtraction

1)

$$\frac{\cancel{3}^2 7}{\cancel{3} x^2} + \frac{\cancel{3}^2 2}{\cancel{3} x} + \frac{5x^2}{3x^2} = \frac{21}{3x^2} + \frac{6x}{3x^2} + \frac{5x^2}{3x^2}$$

$$= \frac{5x^2 + 6x + 21}{3x^2}$$

LCD $3x^2$

2)

$$\frac{x}{x^2 - 4} + \frac{2}{x^2 + 7x + 10} = \frac{x(x+5)}{(x-2)(x+2)(x+5)} + \frac{2(x-2)}{(x+5)(x+5)(x+2)(x-2)}$$

$$= \frac{x^2 + 5x}{(x-2)(x+2)(x+5)} + \frac{2x - 4}{(x+5)(x+2)(x-2)}$$

$$\text{LCD } (x-2)(x+2)(x+5) = \frac{x^2 + 7x - 4}{(x-2)(x+2)(x+5)}$$

3)

$$\frac{y+2}{y^2-y} - \frac{3y}{2y^2-4y+2} =$$

4)

$$\frac{x+2}{x^2-9} + \frac{4}{x-3} - \frac{3x}{x^2-2x-3} =$$

$$\frac{(x+2)(x+1)}{(x-3)(x+3)(x+1)} + \frac{4 \overset{x^2+4x+3}{(x+3)(x+1)}}{(x-3)(x+3)(x+1)} - \frac{3x(x+3)}{(x-3)(x+1)(x+3)}$$

$$\frac{x^2+3x+2}{(x-3)(x+3)(x+1)} + \frac{4x^2+16x+12}{(x-3)(x+3)(x+1)} - \frac{3x^2+9x}{(x-3)(x+3)(x+1)}$$

$$\text{LCD} = (x-3)(x+3)(x+1) \quad \left| \frac{2x^2+10x+4}{(x-3)(x+3)(x+1)} \right.$$

$$\frac{2(x^2+5x+2)}{(x-3)(x+3)(x+1)}$$

HOMEWORK:

UNIT 6 DAY 2
WORKSHEET #1
2-28 (EVEN)